

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-141830

(43)Date of publication of application : 15.05.1992

(51)Int.CI.

G11B 7/085  
G11B 7/14  
G11B 17/04

(21)Application number : 02-263195

(71)Applicant : RICOH CO LTD

(22)Date of filing : 02.10.1990

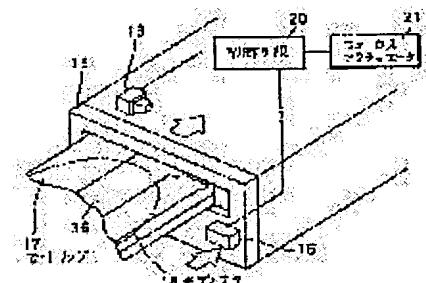
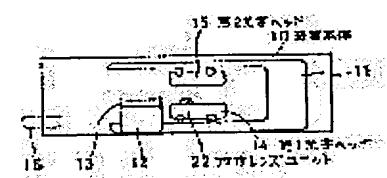
(72)Inventor : OKAMOTO AKIHIKO

## (54) OPTICAL HEAD AND DISK DRIVING DEVICE

### (57)Abstract:

PURPOSE: To realize the loading/unloading of a cartridge as against a device mainbody without the need of the vertical shift structure of the cartridge by retracting an objective lens in a prescribed standby position by means of the operation of a driving means which vertically moves the objective lens as against an optical disk for focus control.

CONSTITUTION: When the cartridge 17 is inserted into the device mainbody 10, a sensor 19 detects the insertion of the cartridge 17 and transmits an on- signal to a control means 20. The focus actuator 21 of a second optical head 15 retracts a bobbin body. Thus, the objective lens is fixed in a direction getting far from the optical disk 18 and it can be moved without being abutted on a spindle motor 12 in the optical disk 18. When the hub of the optical disk 18 reaches a chucking part 13 just above the spindle motor 12, the hub is attracted, the cartridge 17 descends and it is set in the prescribed position of the spindle motor 12. Thus, the smooth loading/unloading of the cartridge as against the cartridge device mainbody can be realized without the need of the vertical shift structure of the cartridge.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

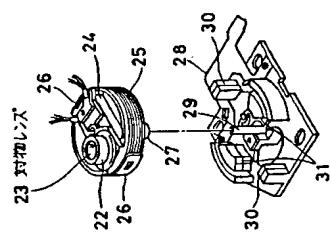
[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

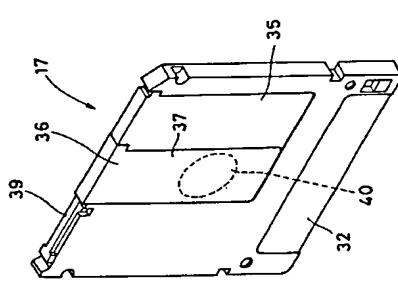




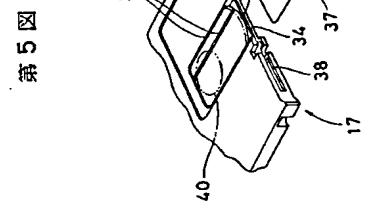
第3図



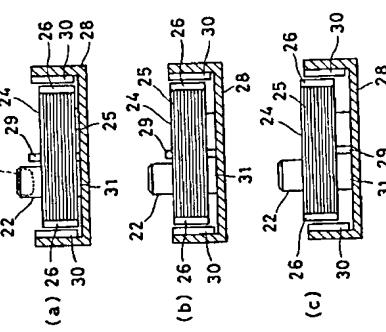
第4図



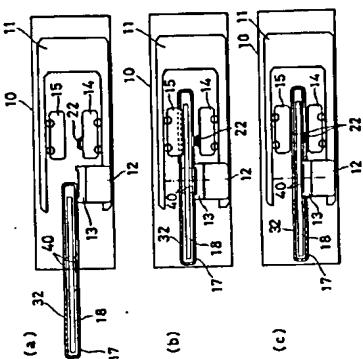
第5図



第6図



第7図



第8図

